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10/506,402	09/01/2004	Frank Joublin	DE 020059	8475

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BRIARCLIFF MANOR, NY 10510

EXAMINER	
VO, HUYEN X	
ART UNIT	PAPER NUMBER
2626	
MAIL DATE	DELIVERY MODE
03/25/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/506,402	JOUBLIN, FRANK	
	Examiner	Art Unit	
	HUYEN X. VO	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 January 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,8,9,11-16,19 and 20* is/are rejected.

7)☒ Claim(s) *6,7,10,17 and 18* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *9/1/2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 1/20/2009 have been fully considered but they are not persuasive. Keith, Jr. full teaches the limitations regarding "a plurality of paths for connecting the nodes mutually and for connecting nodes to service objects which are arranged at one end of each path in the data structure" (*col. 12, lines 31-67; particularly lines 61-65; nodes are "cross-linked" to enable users to navigate "laterally" within the directory; This suggests that there are more than one paths leading to the service objects and/or nodes; also referring to col. 16, lines 65-67*).

2. Regarding claim 2, Keith, Jr. also teaches that the keywords assigned to a certain node are automatically also assigned to the further nodes and/or service objects classified thereunder (*col. 17, line 3-34, e.g. shoes at the current node and "tennis shoes", "dress shoes" are at further nodes*).

3. Applicant's arguments regarding "computer readable medium" have been fully considered but they are not persuasive. There is no description of "computer readable medium" found in the original disclosure.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

> art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claim 12 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The term "computer readable medium" is not found in the disclosure.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1-5, 8-9, 11-16, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhou (US 6999932) in view of Keith, Jr. (US 7260579), and further in view of Anderson et al. (US 6625595).

8. Regarding claims 1 and 11-12, Zhou discloses a method, system, and a program storage device of operating a speech dialogue system (1) which communicates with a user while use is made of a speech recognition device (2) and a speech output device (3), various services (9, 10) being available to the user in the speech dialogue system (1) or via the speech dialogue system (1) and being selectable by the user in a dialogue

held with the speech dialogue system (1), and then for controlling the dialogue for the selection of a service (9, 10) by the user (*the system of figure 1; speech recognizer for recognizing speech inputted from client devices; recognized result is sent to search engine; result of the search is sent back to the client devices*), and when a spoken entry of the user is received search words are extracted from this spoken entry (*figure 2, step 106*) and, on the basis of the search words, a number of candidate nodes (K) and/or candidate service objects (D) are sought whose assigned keywords (S) match the search words according to a predefined acceptance criterion (*figure 2, step 106; matching search keywords to keywords representing services stored in the database is an inherent functionality of the search engine*), (3) a speech output menu is produced to announce to the user the categories and/or the services (9, 10) represented by the candidate nodes (K) and/or candidate service objects (D) found for the user to select a certain category or a certain service (9, 10) (*output 12 in figure 1 and steps 114-118 in figure 2*).

Zhou fails to specifically disclose a database (6) is used having a hierarchical data structure (DS) and a plurality of nodes (K) and a plurality of paths (P) for connecting the nodes (K) mutually and for connecting nodes (K) to service objects (D) which are arranged at one end of each path (P) in the data structure (DS), the service objects (D) representing the services that are available (9, 10) and the nodes (K) representing the categories in which again other categories and/or services are classified which are represented by further nodes (K) or service objects (D) arranged in the hierarchical data structure (DS) on a level (II, III) below the respective node (K),

characterized in that a plurality of paths (P) within the data structure (DS) leads at least to part of the service objects (D) and/or nodes (K) and to each node (K) and each service object (D) one or more keywords (S) are assigned; a search being made in various search steps until after a search step the number of candidate nodes (K) and/or candidate service objects (D) found is situated above a predefined minimum number and below a predefined maximum number and then by means of the speech output device outputting the search results.

Keith, Jr. teaches a database (6) is used having a hierarchical data structure (DS) and a plurality of nodes (K) and a plurality of paths (P) for connecting the nodes (K) mutually and for connecting nodes (K) to service objects (D) which are arranged at one end of each path (P) in the data structure (DS), the service objects (D) representing the services that are available (9, 10) and the nodes (K) representing the categories in which again other categories and/or services are classified which are represented by further nodes (K) or service objects (D) arranged in the hierarchical data structure (DS) on a level (II, III) below the respective node (K), characterized in that a plurality of paths (P) within the data structure (DS) leads at least to part of the service objects (D) and/or nodes (K) and to each node (K) and each service object (D) one or more keywords (S) are assigned (*col. 12, line 31-67, a database that stores information organized in a directory tree structure*).

Since Zhou and Keith, Jr. are analogous art because they are from the same field of endeavor, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Zhou by incorporating the teaching of Keith, Jr. in order to

improve effectiveness of the research system by making it become more like a knowledge system where the user can find specific and related information (*col. 29, lines 25-32*).

The modified Zhou still fail to specifically disclose a search being made in various search steps until after a search step the number of candidate nodes (K) and/or candidate service objects (D) found is situated above a predefined minimum number and below a predefined maximum number and then by means of the speech output device outputting the search results. However, Anderson et al. further teach search being made in various search steps until after a search step the number of candidate nodes (K) and/or candidate service objects (D) found is situated around a reasonable number of usable search results and then by means of the speech output device outputting the search results (*col. 8, lines 34-60; "a reasonable number of usable search results" suggests that that the results are within a predefined minimum and maximum number*).

Since the modified Zhou and Anderson et al. are analogous art because they are from the same field of endeavor, it would have been obvious to one of ordinary skill in the art at the time of invention to further modify Zhou by incorporating the teaching of Anderson et al. in order to improve the search system by providing only reasonable search results.

9. Regarding claims 2 and 13, Zhou fail to specifically disclose characterized in that the keywords assigned to a certain node are automatically also assigned to the further

nodes and/or service objects classified thereunder. However, Keith, Jr. further teach that the keywords assigned to a certain node are automatically also assigned to the further nodes and/or service objects classified thereunder (*col. 17, line 3-34, e.g. shoes at the current node and "tennis shoes", "dress shoes" are at further nodes*).

Since Zhou and Keith, Jr. are analogous art because they are from the same field of endeavor, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Zhou by incorporating the teaching of Keith, Jr. in order to improve effectiveness of the research system by making it become more like a knowledge system where the user can find specific and related information (*col. 29, lines 25-32*).

10. Regarding claims 3 and 14, Zhou fails to specifically disclose characterized in that after an unsuccessful search step the search on or including another level (I, II, III) of the data structure (DS) is continued until the number of candidate nodes (K) and/or candidate service objects (D) found is above the predefined minimum number and below the predefined maximum number. However, Keith, Jr. teach that after an unsuccessful search step the search on or including another level (I, II, III) of the data structure (DS) is continued until the number of candidate nodes (K) and/or candidate service objects (D) found (*col. 13, lines 14-30*).

Since Zhou and Keith, Jr. are analogous art because they are from the same field of endeavor, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Zhou by incorporating the teaching of Keith, Jr. in order to

improve effectiveness of the research system by making it become more like a knowledge system where the user can find specific and related information (*col. 29, lines 25-32*).

The modified Zhou fails to specifically disclose the search on or including another level (I, II, III) of the data structure (DS) is continued until the number of candidate nodes (K) and/or candidate service objects (D) found is above the predefined minimum number and below the predefined maximum number. However, Anderson teaches the search on or including another level (I, II, III) of the data structure (DS) is continued until the number of candidate nodes (K) and/or candidate service objects (D) found is around a reasonable number of usable search results and then by means of the speech output device outputting the search results (*col. 8, lines 34-60; "a reasonable number of usable search results" suggests that that the results are within a predefined minimum and maximum number*).

Since the modified Zhou and Anderson et al. are analogous art because they are from the same field of endeavor, it would have been obvious to one of ordinary skill in the art at the time of invention to further modify Zhou by incorporating the teaching of Anderson et al. in order to improve the search system by providing only reasonable search results.

11. Regarding claims 4 and 15, Zhou fails to specifically disclose characterized in that the search in the data structure (DS) is started on the level (I) of the service objects (D) and then the search is continued step by step on or including a next-higher level (II,

III) below the nodes (K). However, Keith, Jr. further teach that the search in the data structure (DS) is started on the level (I) of the service objects (D) and then the search is continued step by step on or including a next-higher level (II, III) below the nodes (K) (*col. 13, lines 14-30, searching in the order from top level to lower level*).

Since Zhou and Keith, Jr. are analogous art because they are from the same field of endeavor, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Zhou by incorporating the teaching of Keith, Jr. in order to improve effectiveness of the research system by making it become more like a knowledge system where the user can find specific and related information (*col. 29, lines 25-32*).

12. Regarding claims 5 and 16, Zhou fails to specifically disclose characterized in that the predefined minimum number of candidate nodes (K) and/or candidate service objects (D) equals one and when only one candidate service object (D) is determined in a search step, the service (9, 10) represented by this candidate service object (D) is called up. However, it would have been obvious to one of ordinary skill in the art at the time of invention to readily realized that a smallest non-zero integer, in this case "one", should be chosen to represent the lower limit to make sure that all possible results are covered.

13. Regarding claim 8, Zhou further discloses the method as claimed in claim 1, characterized in that the acceptance criterion is a minimum number of matches between

the extracted search words and the keywords assigned to a node or service object (*It is inherent that if there is a match, the object or service is selected, even only one match; and that is a inherent criteria*).

14. Regarding claim 9, Zhou fails to specifically disclose the method of claim 1, wherein within a search step when the number of candidate nodes and/or candidate service objects is too small, the acceptance criterion is broadened. However, it would have been obvious to one of ordinary skill in the art at the time of invention to readily recognize that if the criterion is too strict, not many search results are found. And if the criterion is too broad, many search results will turn up and hence lower search accuracy. Therefore, one of ordinary skill in the art would readily realize that some sort of dynamic adjustment is needed when very few search results or many search results turn up. The advantage of this is to improve search accuracy.

15. Regarding claim 20, Zhou further disclose the method as claim in claim 1, wherein in so far as the speech dialogue system after a first search and an announcement to the user of the categories and/or services representing the candidate nodes and/or candidate service objects found, receives a new spoken entry from the user which contains new search words that can be extracted by the speech dialogue system, determines in a second search a new number of candidate nodes and/or candidate service objects on the basis of the new search words (*referring to figure 1; after the first search, the user can also input a new search*).

16. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zhou (US 6999932) in view of Keith, Jr. (US 7260579), further in view of Anderson et al. (US 6625595), and further in view of Harvey, III et al. (USPN 6701428).

17. Regarding claim 19, the modified Zhou fails to specifically disclose wherein the predefined minimum number of candidate nodes and/or candidate service objects equals one and when only one candidate node is determined in a search step, the search is aborted. However, Harvey, III et al. teach wherein the predefined minimum number of candidate nodes and/or candidate service objects equals one and when only one candidate node is determined in a search step, the search is aborted (*col. 11, lines 40-45; abort search when one candidate is found*).

Since the modified Zhou and Harvey, III et al. are analogous art because they are from the same field of endeavor, it would have been obvious to one of ordinary skill in the art at the time of invention to further modify Zhou by incorporating the teaching of Harvey, III et al. in order to improve search accuracy.

Allowable Subject Matter

18. Claims 6-7, 10, and 17-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUYEN X. VO whose telephone number is (571)272-7631. The examiner can normally be reached on M-F, 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on 571-272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Huyen X Vo/ 3/21/2009
Primary Examiner, Art Unit 2626

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